# IMPROVEMENTS IN OR RELATING TO ORGANIC COMPOUNDS FOR CEMENT MIXES

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Aggregate containing cement mixes, such as grouts, mortars, and concrete for use in construction or for cementing brick, cement block, stucco and even ceramic tiles. These mixes comprise: a) hydraulic cement; b) one or more flocculating agents, selected from sodium alginate, water soluble cellulose ether, polyacrylate, polyacrylamide, guar gum, gelatin, chitosan, dextrin and dialdehyde starches; c) one or more water reducing agents selected from sulphonated naphthalene/formaldehyde condensates, sulphonated melamine/formaldehyde condensates, lignosulphonates, modified lignosulphonates, salts of polyhydroxy carboxylic acids, polyhydroxy carboxylic acids, glucosaccharides, copolymers of linear or cyclic C4-6-olefins and unsaturated ethylenic dicarboxylic acids; d) aggregate; and e) water.

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Cement mix for mortars of improved storage ability - comprises hydraulic cement, hydroxypropyl-methyl cellulose, lignosulphonate, aggregate and water

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The mix comprises a hydraulic cement (I), hydroxypropyl methylcellulose (II), a (modified lignosulphonate (III), an aggregate (IV) and water.

APPLICATION

The mix is combined with a polyhydroxycarboxylic acid (V), its salt and/or a polysaccharide (VI), and an olefin or alkyl benzene sulphonate anionic surfactant to form a mortar.

PREPARATION OF MORTAR

A mixt. of (I), (IV) and water is mixed with a mixt. of the other components.

USES/ADVANTAGES

The mortar is used in construction or for cementing brick, cement block, stucco or ceramic tiles. It has good storage ability and in partic. hydration of the mortar is retarded during mixing, transport and storage for up to 72 h. after mixing without affecting the other properties. The mortar has excellent adhesive properties to brick or block, adsorption of water from the mix onto the porous surface of building units is uniform, air content is stable and the strength needed to support loads placed on it is adequate.

PREFERRED EMBODIMENT

The mortar is pref. prepd. by adding 0.02-0.07 wt.% (II) 0.10-0.20 wt.% sodium or calcium lignosulphonate, 0.35-0.6 wt.% sodium gluconate and 0.001-0.008 wt.% sodium alpha-olefin sulphonate to a mixt. of (I), 200-800 wt.% fine (IV) contg. up to 80 wt.% lime and 25-65 wt.% water.

EXAMPLE

A mixt. of 0.07 wt.% hydroxypropyl methyl cellulose, 0.175 wt.% sodium lignosulphonate, 0.52 wt.% sodium gluconate and 0.008 wt.% alpha-olefin sulphonate was added to a mixt. of Type I Portland cement (898 g), masonry lime (100g) masonry sand (2840) with fineness modulus of 1.81 and half the required water for a water to cement ratio of 0.59.

The mortar had 24.00 vol.% air, 125% flow, cone penetration of 68, pliable consistency after 48 h. from mixing and

good scratch resistance, workability, cohesiveness and adhesion to brick and block.(36pp1616KJPDwgNo0/0).
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